

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

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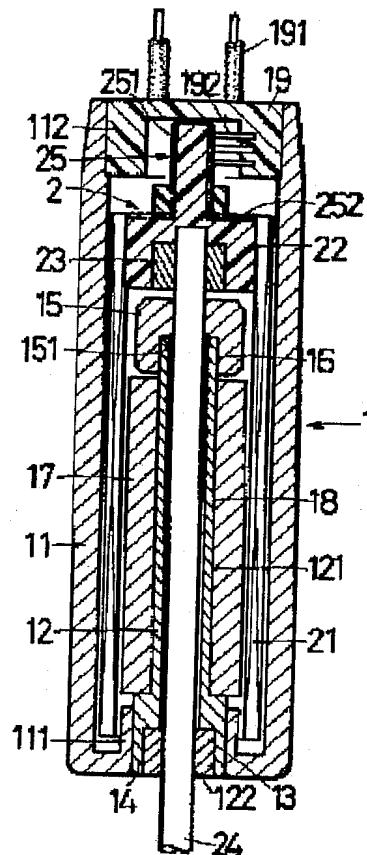
APPLICATION DATE : 29-02-96  
 APPLICATION NUMBER : 08067449

APPLICANT : C I KASEI CO LTD;

INVENTOR : KOYAMA HARUO;

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TITLE : MICROMINIATURE MOTOR,  
 MICROMINIATURE VIBRATING  
 MOTOR FOR PORTABLE APPARATUS  
 AND INFORMATION TRANSMISSION  
 DEVICE



ABSTRACT : PURPOSE: To provide a microminiature motor or a microminiature vibrating motor, for a portable apparatus, which is thin and by which a vibration can be transmitted to a human body with good efficiency and to provide an information transmission device which uses the microminiature vibrating motor for the portable apparatus and which can transmit at least one piece of information to its carrier.

CONSTITUTION: A coreless rotor 2 is constituted of a cylindrical housing 11, of a bearing house 12 which is attached at the inside of the cylindrical housing 11 and of a rotor coil 21 which is composed of a magnet 17 attaches to the outer circumference of the bearing housing 12, which is arranged and installed between a stator 1 and the cylindrical housing 11 and the magnet 17 and which is provided with a shaft 24 in the center. In addition, a microminiature motor is constituted of the coreless rotor 2, of a current supply means which supplies a current to the rotor coil 21 and of a bearing 15 which supports the shaft 24 attached to at least one end of the outer circumference of the bearing house 12.

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